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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,346	03/22/2004	Bily Wang	3244-38	8989

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EXAMINER

DZIERZYNSKI, EVAN P

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,346

Applicant(s)

WANG ET AL.

Examiner

Evan Dzierzynski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 12-16 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 and 04 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Atchinson et al. (US Pat 6371637).

As for claim 1, Atchinson et al (US Pat 6371637) comprises a flexible light array comprising a flexible substrate (column 2 line 45+), shows that it is known to have a flexible substrate with a plurality of conducting circuits therein (column 1, ln 35-40), and teaches a plurality of light emitting diodes 63 arranged into at least one longitudinally and transversely aligned LED array on at least one of two opposite sides of said flexible substrate and respectively electrically connected to the conducting circuits of said flexible substrate. This array is "controllable by a driving circuit" as required by the claim. It is noted that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Since Atchinson comprises a conducting circuit with a light-emitting device, the claimed limitations are met.

As for claim 2, Atchinson teaches a flexible LED array wherein the light emitting diodes are arranged into one longitudinally and transversely aligned LED array on one side of said flexible substrate, forming with said flexible substrate a flexible LED display panel (fig 1 items 20, 32, 37).

As for claim 3, Atchinson further teaches that the flexible LED display panel is used as a signal light for a transportation vehicle (column 4 line 12+).

As for claim 4, Atchinson further teaches that the flexible LED display panel is used as a lighting signboard (column 10 lines 60-67).

As for claim 8, Atchinson further teaches a flexible light-transmitting packing tube 22 that has the substrate 37 packed therein.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson in view of Ho et al. (US 2003/0031464).

As for claim 5, Atchinson teaches the device as discussed above, but fails to teach or disclose using the LED panel for an outdoor TV wall. In a related device, Ho et al. teaches an LED array that provides an outdoor display device for a television (paragraph 0002). It would have been obvious for one of ordinary skill in the art to combine use of an LED array for a television, as taught by Ho et al. with the device of

Atchinson. One would have been motivated to combine the two in order to provide a means of lighting for the TV display.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson in view of Pederson (US Pat 6930615).

As for claim 6, Atchinson teaches the device as discussed above, including a flexible substrate (column 2 line 45+), but fails to teach or disclose that the light emitting diodes are arranged into two longitudinally and transversely aligned LED arrays symmetrically disposed on the two opposite sides of said flexible substrate, forming with the substrate a double-sided LED display panel. In a related field, Pederson teaches a substrate with LEDs arranged into two longitudinally and transversely aligned LED arrays symmetrically disposed on the two opposite sides of a substrate (col 6, ln 30-36, Fig 10). It would have been obvious for one of ordinary skill in the art to combine the LEDs that are transversely and symmetrically opposed on a substrate of Pederson with the device of Atchinson in order to improve the lighting of the device. One would have been motivated to combine in order to provide light on both sides of the substrate (col 6, ln 31+).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson in view of Yan (US Pat 5726535).

As for claim 7, Atchinson teaches the device as discussed above, including a flexible substrate (column 2 line 45+), but fails to teach that the light emitting diodes are arranged into two longitudinally and transversely aligned LED arrays in a staggered manner disposed on the two opposite sides of said flexible substrate a double-sided

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LED display panel with the substrate. In a related device, Yan teaches a substrate with LEDs arranged into two longitudinally and transversely aligned LED arrays in a staggered manner disposed on the two opposite sides of a substrate (Fig 2). It would have been obvious for one of ordinary skill in the art to combine the LEDs that are staggered on both sides of a substrate of Pederson with the device of Atchinson in order to improve the lighting of the device. One would have been motivated to combine the two in order to provide light on both sides of the substrate.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson as applied to claim 8 above, and further in view of Nakamura et al (US Pat 6072171).

As for claim 9, Atchinson teaches a flexible light array with a flexible light-transmitting tube but fails to teach the light transmitting packing tube coated with a layer of color filter coating. Nakamura et al teaches a color filter coating for an illumination device (column 22 line 51+). It would have been obvious for one of ordinary skill in the art to combine the color filter of Nakamura with the device of Atchinson in order to give the device more functionality by enabling different colors of light to be seen. One would have been motivated to combine the two in order to make the device capable of displaying different colors.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atchinson as applied to claim 1 above, and further in view of Hunter (US Pat 6283612).

As for claim 10, Atchinson teaches a LED lighting assembly, but fails to teach it further comprising a flexible light-transmitting plastic packing layer molded on the

flexible substrate over the light emitting diodes. Hunter teaches a light transmitting plastic packing layer molded on the flexible substrate over the LEDs. It would have been obvious for one of ordinary skill in the art at the time to combine the cover of Hunter with the flexible light array of Atchinson. The motivation for combining is to provide the device of Atchinson a protective cover.

As for claim 11, Atchinson further teaches a flexible light array wherein the flexible light-transmitting plastic packing layer is coated with a layer of color filter coating (column 6 line 46+, column 9 line 66 +).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bello Jr (US Pat 6481877) and Chen et al. (US Pat 6520669) teach a flexible substrate with an LED array.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Dzierzynski whose telephone number is (571)-272-2336. The examiner can normally be reached on Monday through Friday 7:00 am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on M-F (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Evan Dzierzynski

4/18/2006



RENEE LUEBKE
PRIMARY EXAMINER